

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
22 January 2004 (22.01.2004)

PCT

(10) International Publication Number
WO 2004/007722 A2

(51) International Patent Classification: C12N 15/12, A01K 67/027, C12N 5/06, G01N 33/00, 33/15

(21) International Application Number: PCT/EP2003/007390

(22) International Filing Date: 9 July 2003 (09.07.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
A 1053/2002 12 July 2002 (12.07.2002) AT

(71) Applicant (for all designated States except US): AXON NEUROSCIENCE FORSCHUNGS- UND ENTWICKLUNGS GMBH [AT/AT]; Rennweg 95b, A-1030 Vienna (AT).

(72) Inventors; and

(75) Inventors/Applicants (for US only): KONTSEKOVÁ, Eva [SK/SK]; Sokolská 7, 903 01 Sencce (SK). FILIPCIK, Peter [SK/SK]; Podhaj 3, Lamac, 841 03 Bratislava (SK).

(74) Agent: SONN & PARTNER PATENTANWÄLTE; Riemergasse 14, A-1010 Vienna (AT).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

— of inventorship (Rule 4.17(iv)) for US only

Published:

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.



WO 2004/007722 A2

(54) Title: TRANSGENIC ANIMAL EXPRESSING ALZHEIMER'S TAU PROTEIN

(57) Abstract: The present invention provides transgenic non-human animals and non-human mammalian somatic and germ cells harbouring a human DNA sequence encoding Alzheimer's Disease (AD) derived tau protein, capable of inducing AD pathology in transgenic animals. Alzheimer's tau protein is expressed on specific genetic backgrounds allowing also simulation of different human diseases including hypertension, diabetes, hyper-cholesterolemia, which are associated with neurodegeneration and are considerable risk factors for AD development. Transgenic animals and cells of the present invention exhibit neurofibrillary pathology and may serve as in vivo and also in vitro assay systems for screening and developing therapeutic and preventive substances and also diagnostic markers and probes for tauopathies and AD. Furthermore these transgenic animals and cell lines derived thereof provide an in vivo and in vitro assay system for neurodegenerative disorders preferably tauopathies and AD which are the result of combinations with other disease as hypertension and others representing risk factors associated with the process of neurodegeneration.